

1 THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY
2 OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

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- 4 1. A dock leveler comprising a support, a deck ^{24 28} pivotally secured to said support at one end
5 for movement between a stored position and an elevated position, a deck lip pivotally
6 connected to said deck assembly at an opposite end to said one end for movement
7 between a pendent stored position and a bridging position projecting from said deck
8 assembly, a lift mechanism ^{76,100,102,104,107} acting on said deck assembly to lift it toward said elevated
9 position, a lip operating mechanism ^{112,114,129,123} operatively connected to said lip to move it from said
10 pendant position to said bridging position upon attainment of said elevated position, and a
11 latch ¹¹⁰ to hold said lip in said bridging position, said latch releasing said lip upon relative
12 movement between said lip and said deck assembly and having a yieldable connection to
13 permit limited pivotal movement between said lip and said deck assembly upon
14 application of a force thereto.
- 15 2. A dock leveler according to claim 1 wherein said latch is moved from an inactive
16 position to an active position in engagement with said lip upon said deck assembly
17 attaining said elevated position.
- 18 3. A dock leveler according to claim 2 wherein said latch is moved to said active position by
19 a latch setting mechanism, movement of said deck assembly from said elevated position
20 releasing said latch setting mechanism.
- 21 4. A dock leveler according to claim 3 wherein said latch setting mechanism includes a lost
22 motion device acting between said support and said deck assembly to accommodate
23 movement of said deck assembly from said elevated position.
- 24 5. A dock leveler according to claim 4 wherein said latch is pivotally mounted to said deck
25 assembly and said latch setting mechanism pivots said latch into engagement with said
26 lip upon attainment of said elevated position.
- 27 6. A dock leveler according to claim 5 wherein said lost motion device includes a tensile
28 member acting between said support frame and said latch.

- 1 7. A dock leveler according to claim 1 wherein said yieldable connection includes a latch
2 spring operable to hold said lip in said bridging position and rotational movement of said
3 lip relative to said deck assembly is accommodated by flexure of said spring.
- 4 8. A dock leveler according to claim 7 wherein said latch spring acts upon a link mounted
5 on said lip and rotation of said lip beyond a predetermined position relative to said deck
6 assembly causes said link and spring to disengage and permit said lip to move to said
7 pendant position.
- 8 9. A dock leveler according to claim 8 wherein disengagement of said link and latch spring
9 releases said latch to permit said latch to return to said inactive position.
- 10 10. A dock leveler according to claim 9 wherein said latch is pivotally connected to said deck
11 assembly and includes a plunger operable upon said link and biased into abutment with
12 said link by said latch spring.
- 13 11. A dock leveler according to claim 10 wherein a stop limits movement of said plunger
14 toward said link.
- 15 12. A dock leveler according to claim 11 wherein pivotal movement of said latch beyond said
16 active position is inhibited by a stop to maintain said plunger in a position for
17 engagement with said link.
- 18 13. A dock leveler according to claim 10 wherein said link has a radiussed tip in abutments
19 with said plunger.
- 20 14. A dock leveler according to claim 7 wherein a counterbalance spring acts upon said lip,
21 said counterbalance spring and said latch spring having a combined force sufficient to
22 maintain said lip in said bridging position.
- 23 15. A dock leveler according to claim 14 wherein said spring and said counterbalance spring
24 act in parallel upon said lip.
- 25 16. A dock leveler comprising a support frame, a deck assembly pivotally secured to said
26 frame at one end for movement between a stored position and an elevated position, a
27 deck lip pivotally connected to said deck assembly at an opposite end to said one end for
28 movement between a pendant stored position and a bridging position projecting from said
29 deck, a lift mechanism acting on said deck to bias it toward said elevated position, a lip
30 operating mechanism operatively connected to said lip to move it from said pendant

1 position to said bridging position upon attainment of said elevated position and including
2 a first tensile member acting between said support frame and said lip to initiate
3 movement from said pendant position as said deck assembly approaches said elevated
4 position, and a latch to hold said lip in said bridging position, said latch being moveable
5 from an inactive position to an active position in which said latch acts upon said lip as
6 said deck assembly approaches said elevated position, said latch having a yieldable
7 connection to permit limited pivotal movement between said lip and said deck assembly
8 upon application of a force thereto.

9 17. A dock leveler according to claim 16 wherein said latch is moved to said active position
10 by a second tensile member.

11 18. A dock leveler according to claim 17 wherein said tensile members operate conjointly as
12 said deck assembly approaches said elevated position to move said lip and said latch
13 respectively.

14 19. A dock leveler according to claim 16 wherein said yieldable connection includes a latch
15 spring acting upon said lip to bias said lip to said bridging position.

16 20. A dock level according to claim 19 wherein a stop is positioned to limit the action of said
17 latch spring on said lip, pivotal movement of said lip relative to said deck thereby
18 disengaging said lip from said latch and permitting said latch to return to said inactive
19 position.

20 21. A dock leveler according to claim 20 wherein said latch is pivotally connected to said
21 deck assembly and is maintained in said active position by engagement with said lip
22 when said deck is moved from said elevated position.

23 22. A dock leveler according to claim 21 wherein said spring acts through a plunger to
24 engage a link secured to said lip, said plunger and link abutting to maintain said latch in
25 said active position.

26 23. A dock leveler according to claim 22 wherein said stop acts on said plunger to limit
27 movement thereof.